

Appalachian State University
Economics 2030
Test 1 – Due September 19, 2016

Instructions: Since this is a Take Home Test there is no choice - attempt ALL questions. Points are shown in parentheses so use this as a guide for the length of the required answer and degree of difficulty.

1. (5) Define opportunity cost. What is your opportunity cost of attending class on a particular day? What is your opportunity cost of NOT attending class?
2. (5) List 4 factors that will cause a shift in the demand curve for a good and identify the direction of the shift.
3. (10) Draw a graph showing Demand and Supply. Label the equilibrium. Use the graph to show Excess Demand. If excess demand is positive what will happen to the price of the good? Describe the process for the market to achieve equilibrium.
4. (20) The table below list the cross-price elasticity values for several goods. The percent quantity change is measured for the first good and the percent price change for the second good.

Good Pair	Cross price elasticity of demand
Air-conditioning units and electricity	-0.34
Coke and Pepsi	+0.63
SUVs and gasoline	-0.28
Butter and margarine	+1.54
McDonald' burgers and Burger King burgers	+0.82

- a) Explain the sign of each of the cross-elasticity values. What does it imply about the relationships between the two goods?
 - b) Compare the absolute values of the elasticities and explain their magnitudes. For example, why is the cross-elasticity for the burgers greater than for the soft drinks?
 - c) Use the information to compute how a 5% increase in the price of Coke affects the demand for Pepsi.
 - d) Based on these data would you predict a larger price difference between Coke and Pepsi or between McDonald's and Burger King? Explain.
5. (15) Volkswagen has admitted to intentionally falsifying (through software controlling the engine emissions) the emission performance of their diesel engines. Is this an example of market failure? How was Volkswagen able to do this? Why were the customers not aware? Will this have an effect on Volkswagen's future sales? Why?
 6. (20) The demand for handmade acoustic guitars is high now. These guitars are made in small shops usually employing no more than a few highly skilled luthiers in each shop. Describe the impact (using Supply and Demand) on the equilibrium price and quantity of handmade acoustic guitars of each of the following events.
 - a) Environmentalists succeed in banning the import of tropical hardwoods (such as Brazilian rosewood) in the U/S. forcing luthiers to switch to more expensive (difficult to obtain) woods.
 - b) Music featuring acoustic guitars experiences an increase in demand as audiences tire of low talent

metal bands.

- c) The country goes into a deep recession (as in 2008) and incomes of Americans fall sharply.
- d) A foreign producer develops factory processes that produce guitars of similar quality as these small shops but at much lower prices.

7. (10) You own a store selling greeting cards. Your clerks have compiled the following data.

January Sales	Price per card	February	Price per card
500	\$0.50	1000	\$0.50
450	\$0.75	950	\$0.75
400	\$1.00	875	\$1.00
375	\$1.25	800	\$1.25
350	\$1.50	750	\$1.50

- a) Graph the data to show the relation between price and sales and the month.
- b) What difference do you see by comparing the graph for January and February?
- c) What conclusions can you draw from these data?

5. (15) Robinson Crusoe can gather 10 coconuts or catch 1 fish per hour. Friday can gather 30 coconuts or catch 2 fish per hour.

- a) What is Crusoe's opportunity cost of catching one fish?
- b) What is Friday's opportunity cost of catching one fish?
- c) Who has an absolute advantage in catching fish?
- d) Who has a comparative advantage in catching fish?

d) Suppose they specialize and trade. What would the exchange rate between fish and coconuts be? Explain your answer.